2SD1820A

Silicon NPN epitaxial planar type

For general amplification Complementary to 2SB1219A

Features

- \bullet Low collector-emitter saturation voltage $V_{\mbox{CE(sat)}}$
- S-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing.

Absolute Maximum Ratings $T_a = 25^{\circ}C$

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	V _{CBO}	60	V	
Collector-emitter voltage (Base open)	V _{CEO}	50	V	
Emitter-base voltage (Collector open)	V _{EBO}	5	V	
Collector current	I _C	500	mA	
Peak collector current	I _{CP}	1	А	
Collector power dissipation	P _C	150	mW	
Junction temperature	Tj	150	°C	
Storage temperature	T _{stg}	-55 to +150	°C	

- Package
- Code
- SMini3-G1
- Pin Name
 - 1. Base
 - 2. Emitter
 - 3. Collector
- Marking Symbol: X

Electrical Characteristics $T_a = 25^{\circ}C \pm 3^{\circ}C$

Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V _{CBO}	$I_{\rm C} = 10 \ \mu {\rm A}, I_{\rm E} = 0$	60			V
Collector-emitter voltage (Base open)	V _{CEO}	$I_{\rm C} = 2 {\rm mA}, I_{\rm B} = 0$	50			V
Emitter-base voltage (Collector open)	V _{EBO}	$I_{\rm E} = 10 \ \mu A, I_{\rm C} = 0$	5			V
Collector-base cutoff current (Emitter open)	I _{CBO}	$V_{CB} = 20 \text{ V}, I_E = 0$			0.1	μΑ
Forward current transfer ratio *1	h _{FE1} *2	$V_{CE} = 10 \text{ V}, I_C = 150 \text{ mA}$	85		340	
	h _{FE2}	$V_{CE} = 10 \text{ V}, I_C = 500 \text{ mA}$	40			
Collector-emitter saturation voltage *1	V _{CE(sat)}	$I_{\rm C} = 300 \text{ mA}, I_{\rm B} = 30 \text{ mA}$		0.35	0.60	V
Transition frequency	f _T	$V_{CB} = 10 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$		200		MHz
Collector output capacitance (Common base, input open circuited)	C _{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		6	15	pF

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

*2: Rank classification

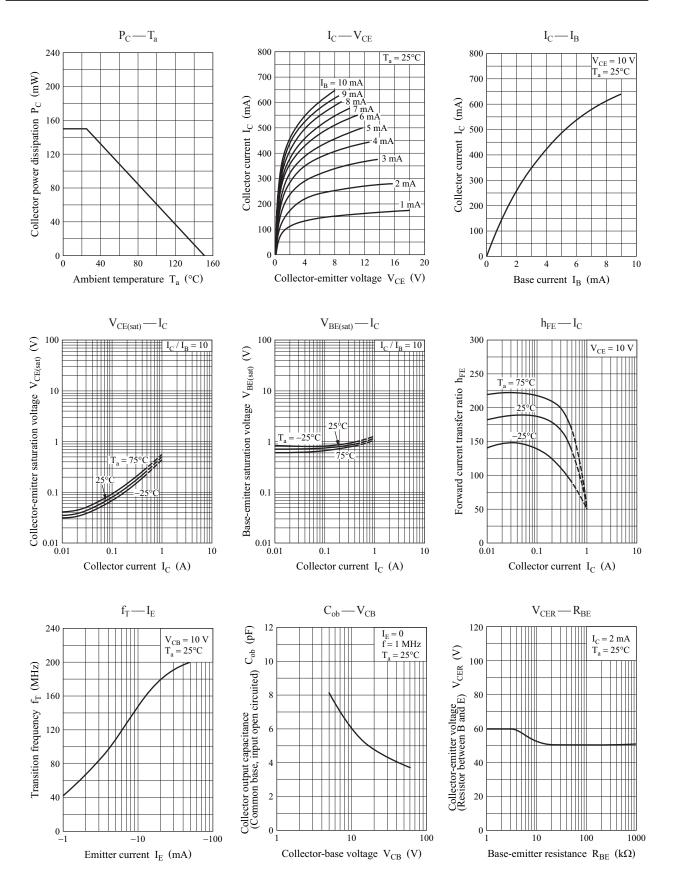
Rank	Q	R	S	No-rank
h_{FE1}	85 to 170	120 to 240	170 to 340	85 to 340
Marking symbol	XQ	XR	XS	Х

Product of no-rank is not classified and have no marking symbol for rank.

^{2. *1:} Pulse measurement

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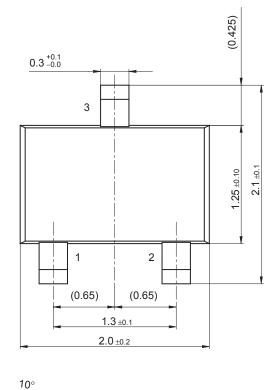
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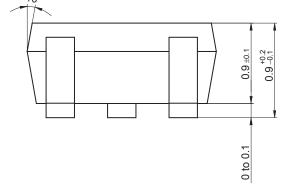


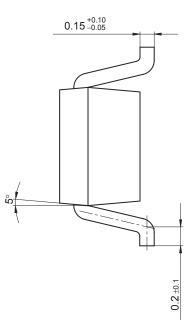
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SMini3-G1

Unit: mm







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